

## ABSTRACT

Electrostatic precipitator (ESP) systems and methods are provided. A system includes at least one corona discharge electrode and at least one collector (and likely, at least a pair of collector electrodes) that extend downstream from the corona discharge electrode. An insulated driver electrode is located adjacent the collector electrode, and where there is at least a pair of collector electrodes, between each pair of collector electrodes. A high voltage source provides a voltage potential to the at least one of the corona discharge electrode and the collector electrode(s), to thereby provide a potential different therebetween. The insulated driver electrode(s) may or may not be at a same voltage potential as the corona discharge electrode, but should be at a different voltage potential than the collector electrode(s).